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| APPLICATION NO.                   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/573,815                        | 03/28/2006  | Isamu Yoshiii        | L9289.06137         | 7697             |
| 52989                             | 7590        | 12/30/2008           | EXAMINER            |                  |
| Dickinson Wright PLLC             |             |                      | TRAN, KHANH C       |                  |
| James E. Ledbetter, Esq.          |             |                      |                     |                  |
| International Square              |             |                      | ART UNIT            | PAPER NUMBER     |
| 1875 Eye Street, N.W., Suite 1200 |             |                      |                     |                  |
| Washington, DC 20006              |             |                      | 2611                |                  |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |
|------------------------------|--------------------------------------|--------------------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/573,815 | <b>Applicant(s)</b><br>YOSHII ET AL. |
|                              | <b>Examiner</b><br>KHANH C. TRAN     | <b>Art Unit</b><br>2611              |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 March 2006.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 7 is/are rejected.
- 7) Claim(s) 2-6 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 March 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-166/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claim(s) 7 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claim 7 recites multiple steps "**determining**" "**detecting**" "**generating**" and "**combining**" in which there is no apparatus positively recited to accomplish these steps. The transformation requirement to be statutory is a physical transformation, not data transformation. Claim 7 does not have physical transformation.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talwar et al. U.S. Patent 6,891,902 B2.

Regarding claims 1 and 7, Talwar invention is directed to an apparatus and a method for reducing the PAR of a transmission signal to minimize distortion of the transmission signal; see column 2 lines 35-41.

In column 6 lines 4-10, Talwar embodiment of the invention includes ~~adaptive modulation~~ and coding in which the PAR processing should generally only introduce a small amount of PAR distortion. Further in column 8 lines 25-40, FIG. 8 embodiment discloses a first transmitter chain includes an encoder 810, a modulator 820 and a frequency up converter 850. A second transmitter chain includes an encoder 830, a modulator 840 and a frequency up converter 860. The transmission signals corresponding to different transmitter chains can each include different modulation rates, and/or different codes. The LO for each transmission chain can be a different frequency for a multiple carrier transmission system. In view of the foregoing disclosure, each modulation rate, and/or different code is determined separate for each transmitter chain respectively. Modulate transmission signals 820 840 (see FIG. 8) correspond to the determining section claimed.

Talwar invention includes the step of finding peaks in a transmission signal; see column 6 lines 20-25. PAR processing 875 (see FIG. 8) corresponds to the detection section claimed.

Talwar invention differs from the pending claim in that Talwar does not expressly disclose the step of generating a waveform with an inverse characteristic of a waveform of the peak as set forth in the pending claim.

In column 7 line 62 via column 8 line 8, Talwar further teaches in column 7 lines 1-15 that  $y(n) = x(n) X w(n)$ , wherein  $w(n)$  is PAR reduction window and  $x(n)$  is the transmission signal  $x(n)$ . In view of the foregoing equation, one of ordinary skill in the art at the time the invention was made would have recognized that  $w(n)$  represents a waveform with an inverse characteristic of a waveform as claimed.  $Y(n)$  also represents the combining step. In view of that, PAR processing 875 (see FIG. 8) also corresponds to the combination section claimed.

Furthermore, FIG. 8 includes a first transmitter chain and a second transmitter chain with different modulation rates, and/or different codes. The PAR processing is based upon the modulation parameters of the signal of the transmitter chain that requires the minimum distortion; see column 8, lines 39-45. In view of that,  $y(n)$  represents the waveform with the inverse characteristic at a frequency which corresponds to both different modulation rates, and/or different codes, respectively.

Referring back to FIG. 8, the transmitter includes amplifier 890 and antenna T that corresponds to the transmission section claimed.

***Allowable Subject Matter***

3. Claims 2-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cleveland U.S. Patent 7,023,900 B2.

Jalali U.S. Patent 7,012,883 B2.

Schenk U.S. Patent 6,529,925 B1.

Wright et al. U.S. Patent 7,061,991 B2.

Classon et al. U.S. Patent Application Publication No. US 2003/0123559 A1.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

*/KHANH C. TRAN/  
Primary Examiner, Art Unit 2611*